Decision Support Systems for Objective Stock Positioning

5 November 2003

OVERVIEW

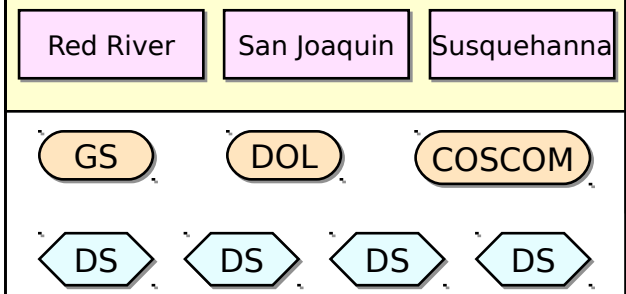
- History
- Inventory and Transportation Costs
- SSF Decision Support Systems
- Management of Risk
- Enterprise Logistics Chain Simulation
- The Logistics Modernization Program
- Neural Networks for Demand & Repair Forecasting
- Status & Summary

HISTORY

- **FY99 – FY00: AMSAA proposals to develop Decision Support Systems in support of Single Stock Fund**
  - Requirements determination methodologies
  - Stock positioning / returns disposition
  - Stock control
  - Support structure alternatives
  - Credit policies
- **FEB 00: AMC memorandum "Stock Positioning Optimization – Readiness Targeted System (SPORTS)" published**
  - Single Stock Fund policies to support readiness and customer wait metrics
- **MAR 01: DALO-SMP memorandum supporting "SPORTS"**
- **FY01 – FY02: AMC funds AMSAA to develop Decision Support Systems for cost effective Single Stock Fund stock policies that support "SPORTS" objectives**
  - Assist in implementation

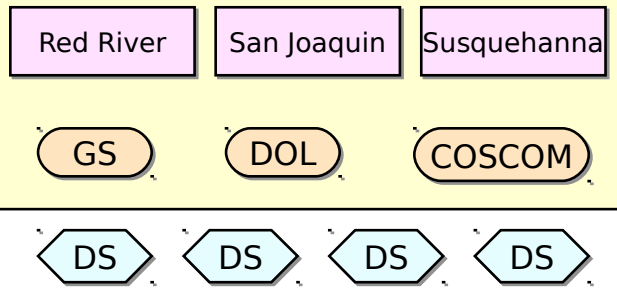
SINGLE STOCK FUND (SSF) MILESTONES (MS)

Pre-SSF



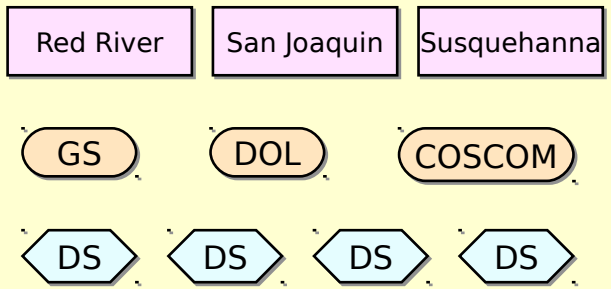
- Depot Reorder Point, Requirements Objective, Repair Action Point
- Fair Share procurement distribution to Principal Distribution Sites
- Item Manager requisition referrals

SSF MS I/II



- Enterprise Reorder Point, Requirements Objective, Repair Action Point computed by summing:
  - *Depot values*
  - *Below Depot* - ***local, uncoordinated***
  - *Includes all AMC demands*
- Fair Share procurement distribution only to Principal Distribution Sites
- Item Managers and search matrix requisition referrals
- Local retention rules
- Ad hoc Enterprise repair rules

Post-SSF MS III



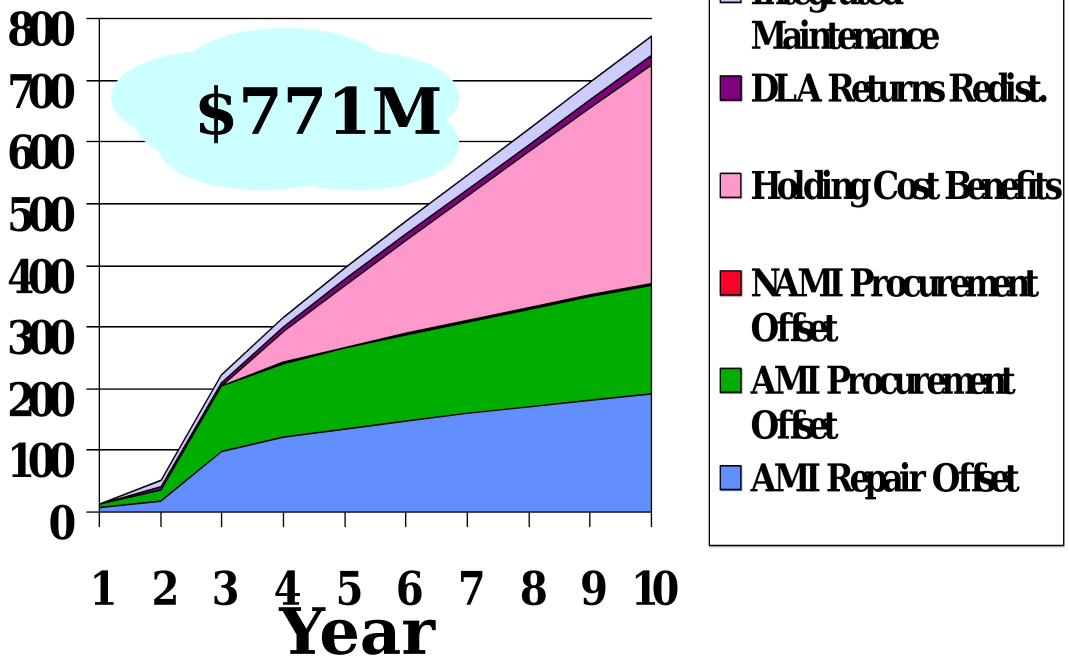
- Multi-Echelon Enterprise Requirements Determination
- Distribution / Redistribution
- Requisition Referral
- Returns Disposition
  - *Enterprise Retention Levels*
  - *Local Retention Levels*
- Coordinated Repair

Single Stock Fund Cost Benefit Analysis (CBA)

(10 Years of CBA Inventory Benefits)

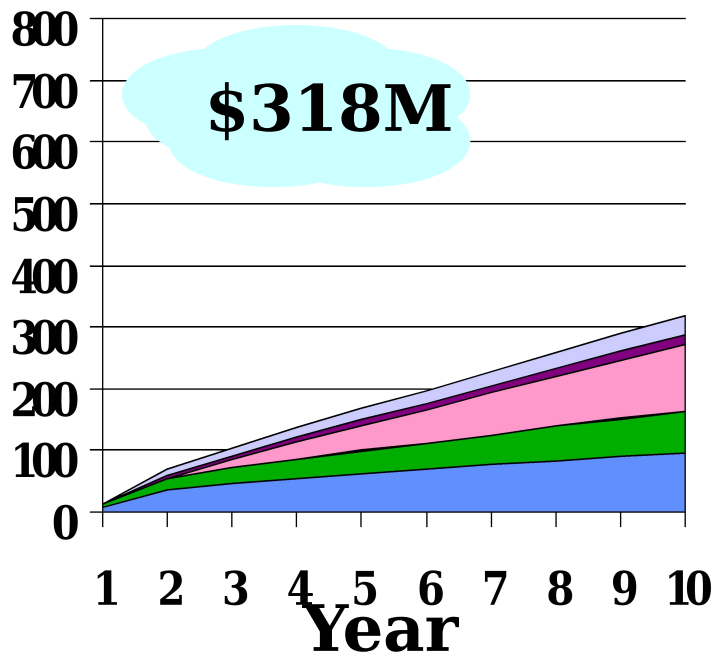
Cumulative Benefits $M

MS3 in Year 2



Cumulative Benefits $

No MS 3 or MS3 W/O RD* Chang

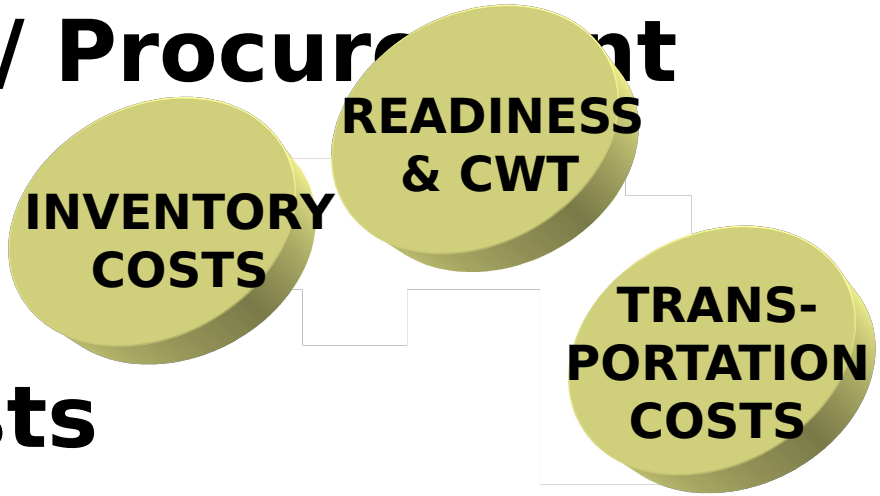


Optimized/Improved Requirements Determination required

or Projected MS3 Benefits of $453M will not occur.

FUNDAMENTAL LOGISTICS CHAIN TRADEOFFS

- Readiness & Customer Wait Time (CWT)
- Inventory / Repair / Procurement Costs
- Transportation Costs



INVENTORY COSTS

- **Shipping a unit from a location can affect:**
  - Readiness and Customer Wait Time for location's customers
  - Future replenishment costs at location
    - ✓ **Administrative ordering cost**
    - ✓ **Transportation cost for replacement un...**
  - Future repair costs for reparables
  - Storage costs, if different at depot and below depot
  - Future redistribution decisions

Affects when locations hit Reorder Point / Repair Action Point

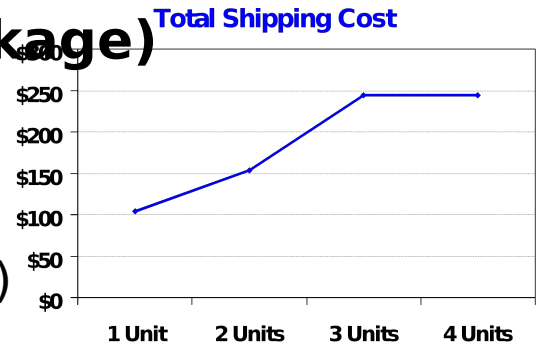
Not All Stock and Excess Created Equally

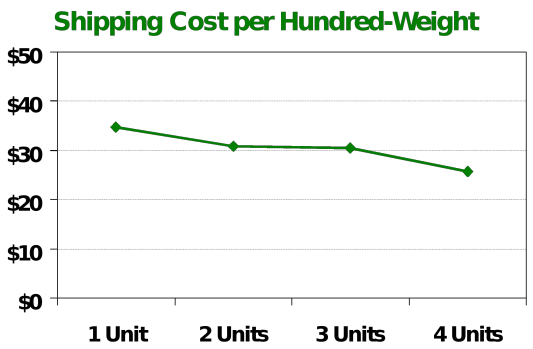
TRANSPORTATION COSTS

- **Processing / Administrative Costs at Shipper(s)**
- **Packaging Costs**
- **Shipping Costs**
  - CONUS Modes of Shipment
    - ✓ **Truck**
    - ✓ **Rail**
    - ✓ **Air Freight (< 2500 lbs)**
    - ✓ **Small Air (< 99 lbs)**
    - ✓ **UPS (< 70 lbs)**
  - Function of weight, volume, and distance (often nonlinear)
  - Function of priority
  - Economies of dedicated routes, transshipment and crossdocking
- **Receipt Costs**

TRANSPORTATION COSTS – EXAMPLE

- **250 pound item by truck from Ft. Hood to Ft. Polk**
- **Processing cost at Hood: $81**
- **Receipt cost at Polk: $32**
- **Packaging cost: $0 (still in depot package)**
- **Shipping cost for:**
  - 1 unit: $104.10 ($34.70 / hundred-weight)
  - 2 units: $154.00 ($30.80 / hundred-weight)
  - 3 units: $243.70 ($30.46 / hundred-weight)
  - 4 units: $243.70 ($25.64 / hundred-weight)

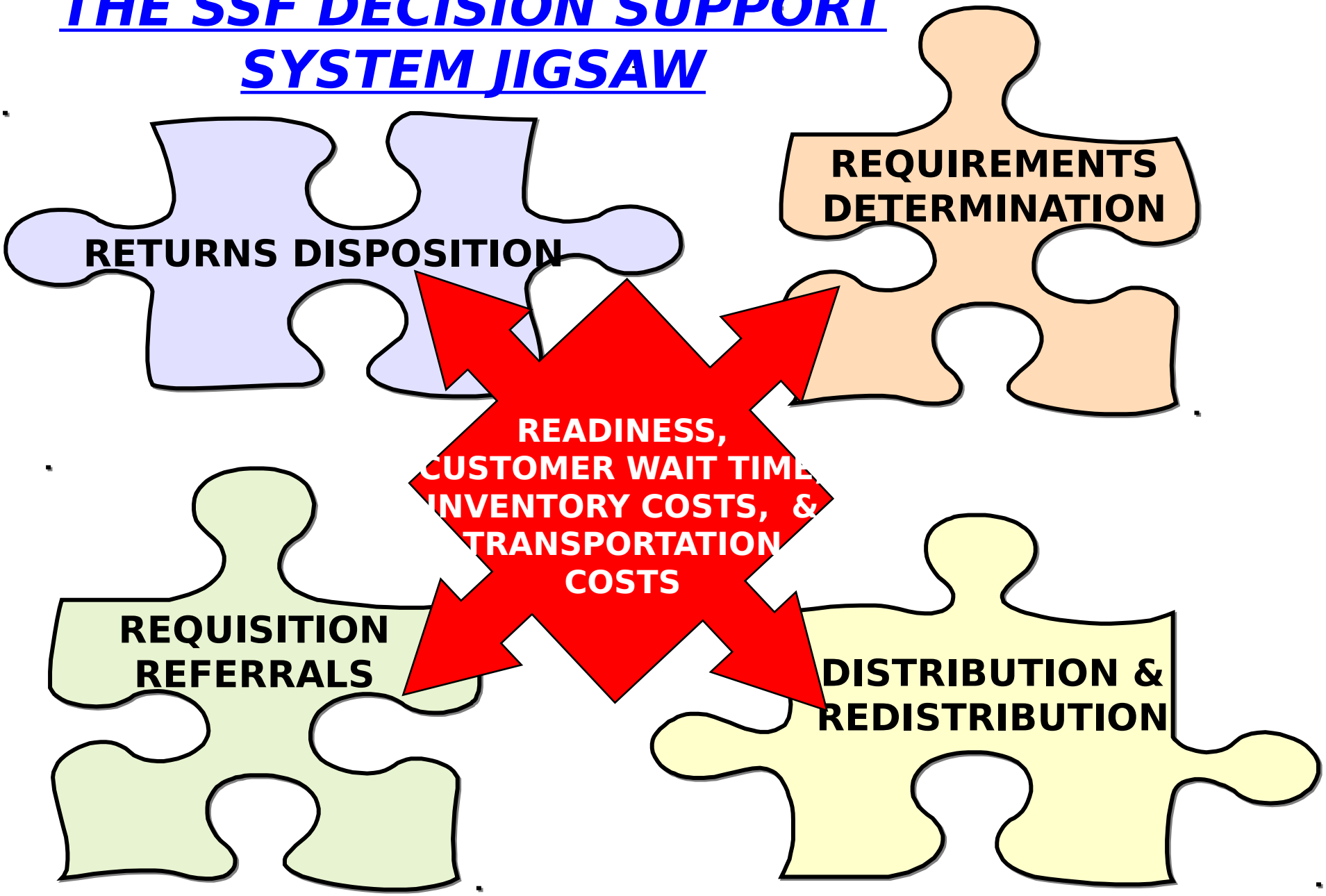




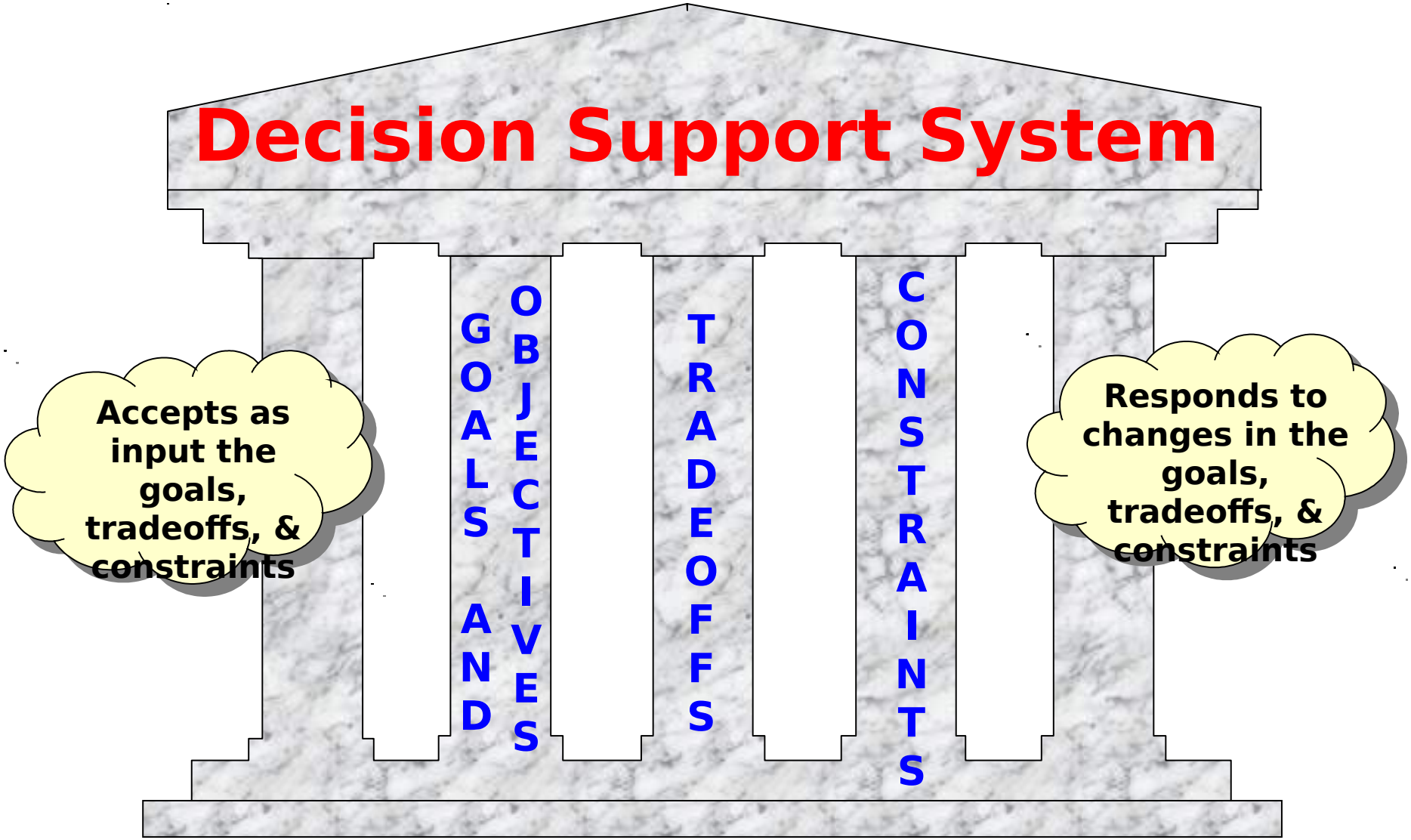
TRANSPORTATION COST DATABASE

- **FEDEX / UPS / US Postal rates available on disk or web sites**
- **Defense Logistics Agency database for shipments from Principal Distribution Sites**
- **Military Traffic Management Command maintains only real time database for all Department of Defense Activity Address Codes**
  - Negotiated rates
  - Standard tariffs
  - Method of shipment
  - Produces Bills of Lading
- **Meeting with Military Traffic Management Command**
  - Current access via e-mail
  - Fee for service
    - ✓ **AMC - Military Traffic Management Command negotiation for regular use**

THE SSF DECISION SUPPORT SYSTEM JIGSAW



FUNDAMENTALS OF ANY DSS


Decision Support System
GOALS AND OBJECTIVES
TRADEOFFS
CONSTRAINTS
Accepts as input the goals, tradeoffs, & constraints
Responds to changes in the goals, tradeoffs, & constraints

REQUIREMENTS DETERMINATION DECISION SUPPORT SYSTEM

- **Goals / Objectives:**
  - Determine most cost effective asset levels and replenishment policies for Single Stock Fund sites to achieve Readiness, Customer Wait Time and Supply Performance Goals
- **Tradeoffs:**
  - Readiness, Customer Wait Time, Inventory Cost, Transportation Cost
- **Constraints:**
  - Centralized, coordinated, or local level calculations

Push, Pull, Push & Pull

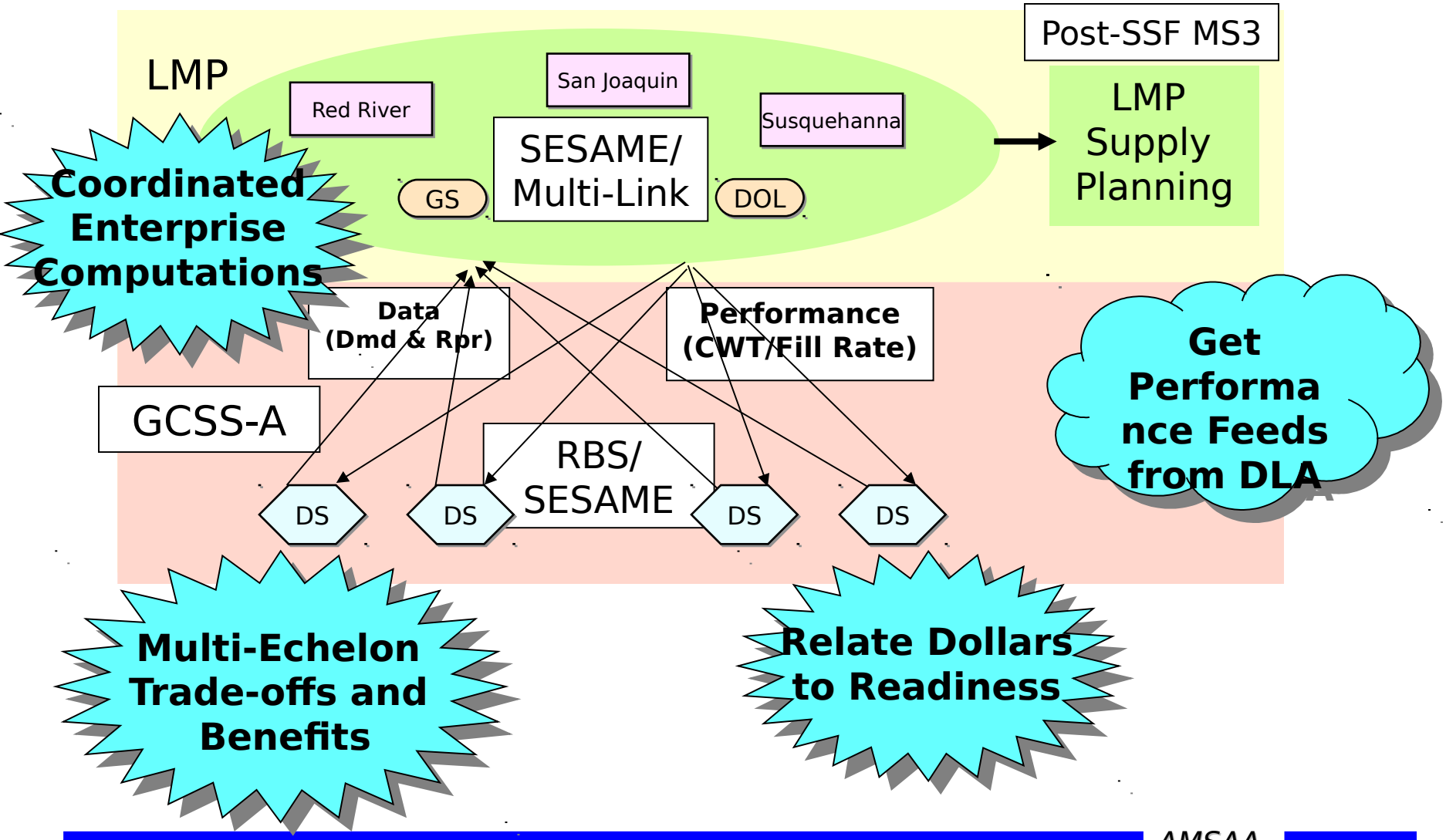
Multi-Echelon Requirements Determination

Update Policies and Manage Turbulenc e

CANDIDATE METHODOLOGIES

- **Centralized Multi-Echelon Requirements Determination (Pull)**
  - Exact Multi-Echelon Readiness Based Sparing Model
- **Coordinated Multi-Echelon Requirements Determination (Pull)**
  - Single location computations with performance targets based upon multi-echelon performance and cost impacts
- **Enterprise Reorder Point, Requirements Objective, and Repair Action Point (Push)**
  - Distribution Decision Support System
  - Optimistic in that it does not consider internal transport pipelines
  - Most closely resembles what we do today

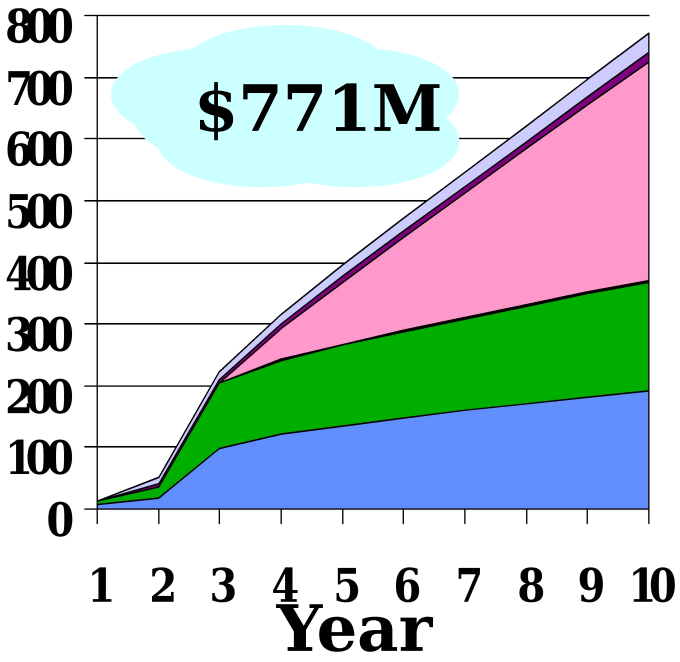
REQUIREMENTS DETERMINATION BLUEPRINT

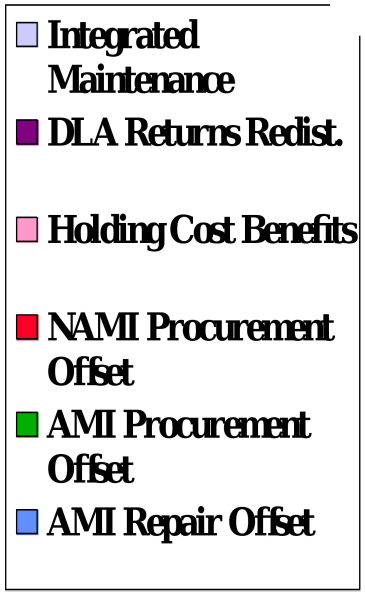


Single Stock Fund Cost Benefit Analysis
(10 Years of CBA Inventory Benefits)

Cumulative Benefits $M

MS3 in Year 2





Cumulative Benefits $

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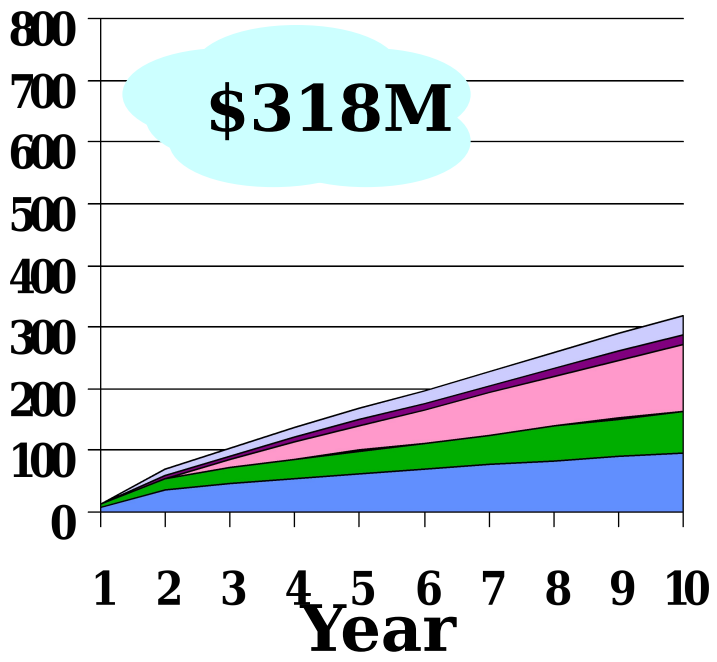
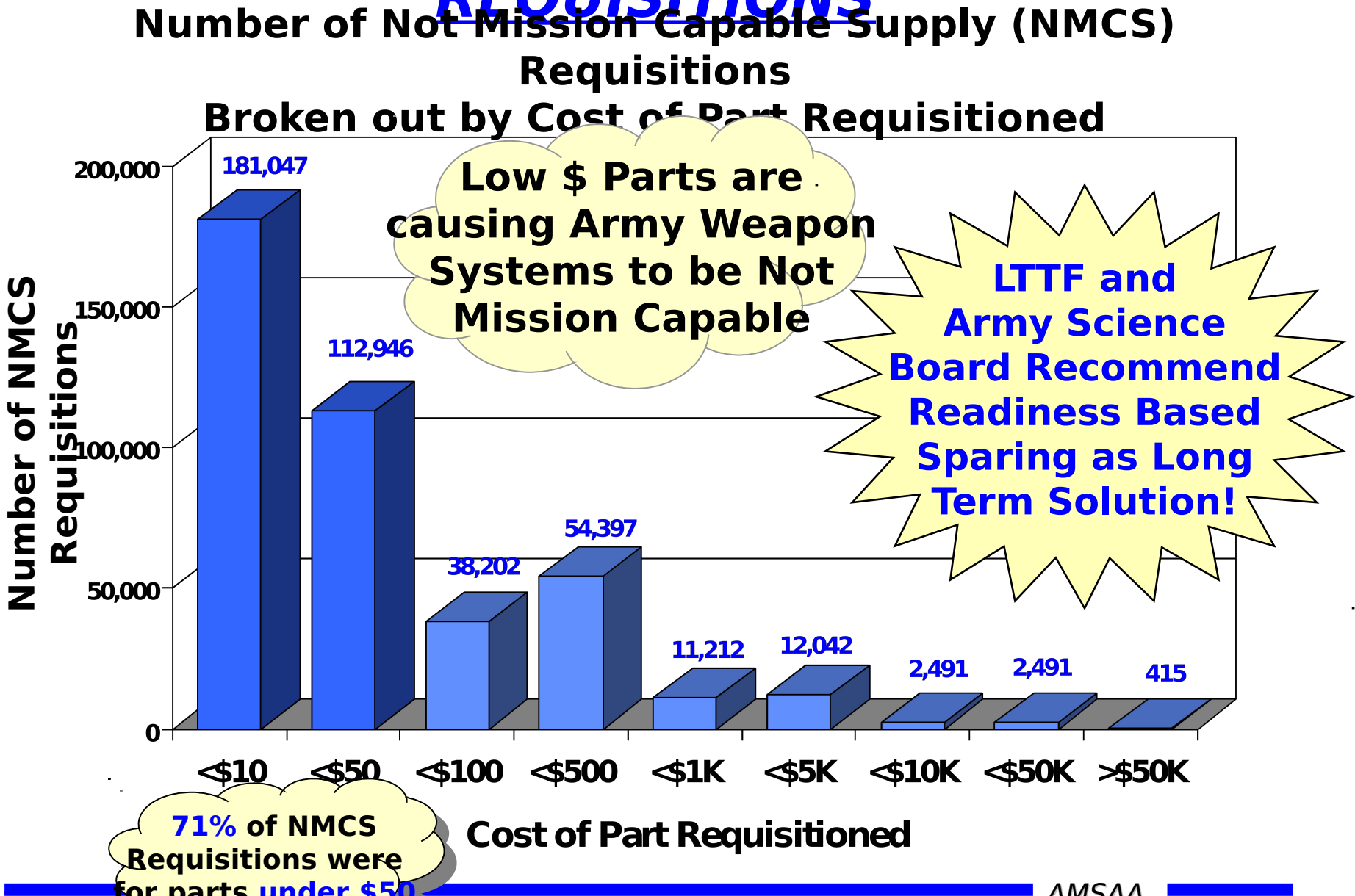


Optimized/improved Requirements Determination required

or Projected MS3 Benefits of $453M will not occur.

*RD = Requirements Determination

MANAGEMENT OF RISK – NMCS REQUISITIONS



MANAGING RISK FOR ONE ITEM

Reorder Point = 15

Safety Level = 0

Lead Time Demand Distribution = Normal

Mean Lead Time Demand = 15 Units

Standard Deviation =

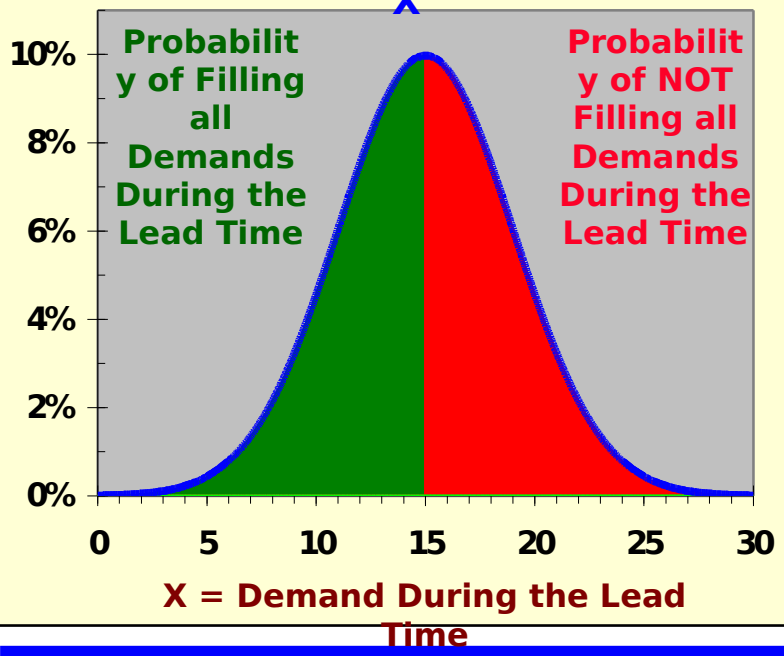
Safety Level Cos $0

Stock Availability = 50.0%

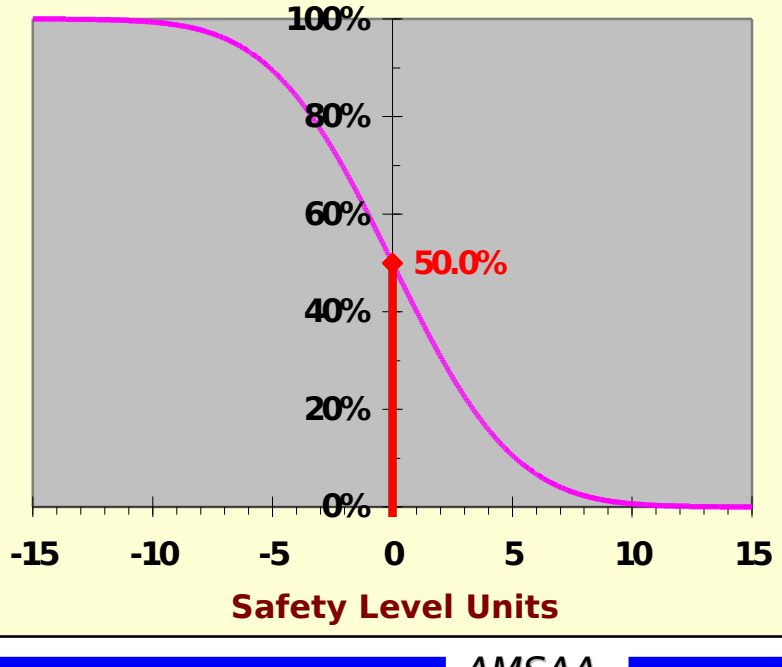
For The Additional Safety Level Units Stocked:

Additional Safety Level Cost	N/A
Decrease in Risk of Backorders	N/A
Cost per 1% Reduction in the Risk of Backorders	N/A

PROBABILITY LEAD TIME DEMAND = X



RISK OF BACKORDERS



MANAGING RISK FOR ONE ITEM

Reorder Point = Safety Level + Mean Lead Time Demand

Safety Level = 3

Reorder Point 18

Lead Time Demand Distribution = Normal

Mean Lead Time Demand = 15 Units

Standard Deviation = 4 Units

Cost per Unit Stocked = $1,000

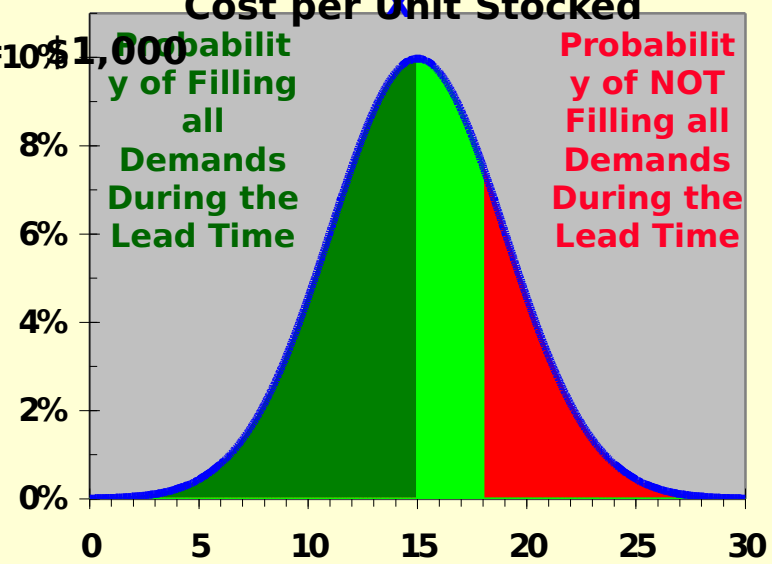
Safety Level Cost = $3,000

Stock Availability = 77.3%

For The Additional Safety Level Units Stocked:

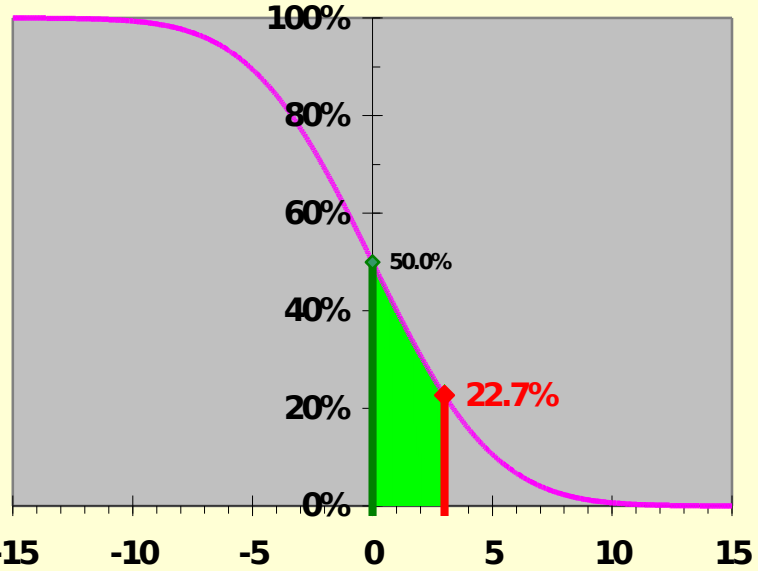
Additional Safety Level Cost	$3,000
Decrease in Risk of Backorders	27.3%
Cost per 1% Reduction in the Risk of Backorders	$110

PROBABILITY LEAD TIME DEMAND = X



X = Demand During the Lead Time

RISK OF BACKORDERS



Safety Level Units

MANAGING RISK FOR ONE ITEM

Reorder Point = 21

Safety Level = 6

Lead Time Demand Distribution = Normal

Mean Lead Time Demand = 15 Units

Standard Deviation = 4 Units

Cost per Unit Stocked = $1,000

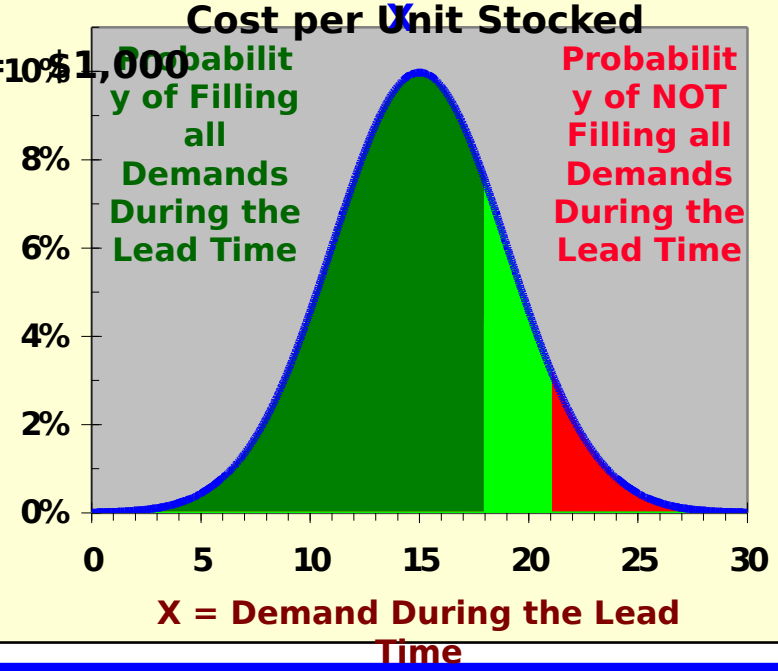
Safety Level Cost = $6,000

Stock Availability = 93.3%

For The Additional Safety Level Units Stocked:

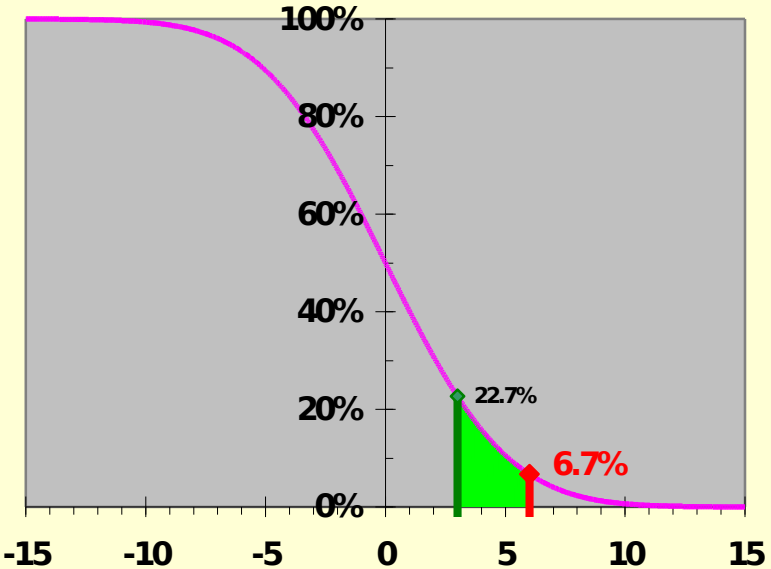
Additional Safety Level Cost	$3,000
Decrease in Risk of Backorders	16.0%
Cost per 1% Reduction in the Risk of Backorders	$188

PROBABILITY LEAD TIME DEMAND = X



X = Demand During the Lead Time

RISK OF BACKORDERS



Safety Level Units

MANAGING RISK FOR ONE ITEM

Reorder Point = 24

Safety Level = 9

Lead Time Demand Distribution = Normal

Mean Lead Time Demand = 15 Units

Standard Deviation = 4 Units

Cost per Unit Stocked = $1,000

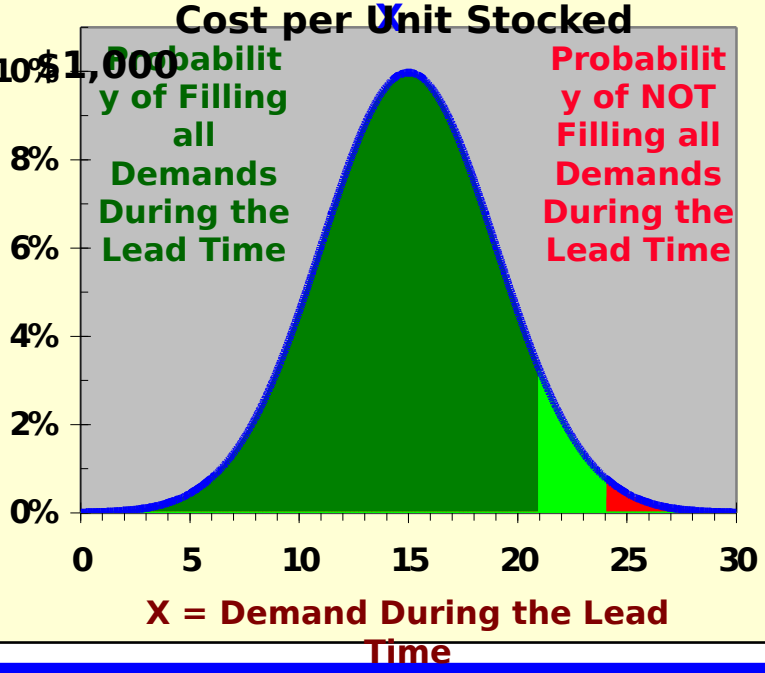
Safety Level Cost = $9,000

Availability = 98.8%

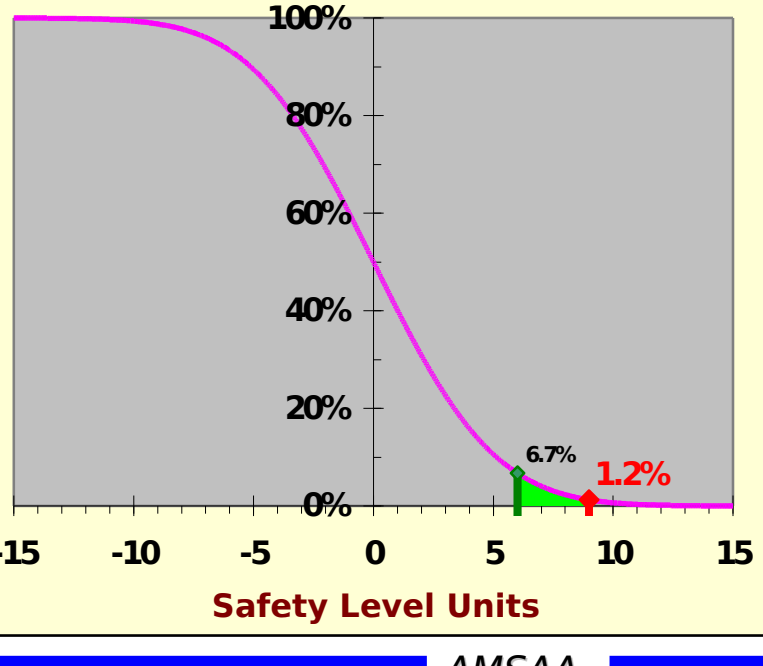
For The Additional Safety Level Units Stocked:

Additional Safety Level Cost	$3,000
Decrease in Risk of Backorders	5.5%
Cost per 1% Reduction in the Risk of Backorders	$545

PROBABILITY LEAD TIME DEMAND = X



RISK OF BACKORDERS



MANAGING RISK FOR ONE ITEM

Reorder Point = Lead Time Demand Distribution + Safety Level

Lead Time Demand Distribution = Normal

Mean Lead Time Demand = 15 Units

Standard Deviation = 4 Units

Cost per Unit Stocked = $1,000

Safety Level = 12

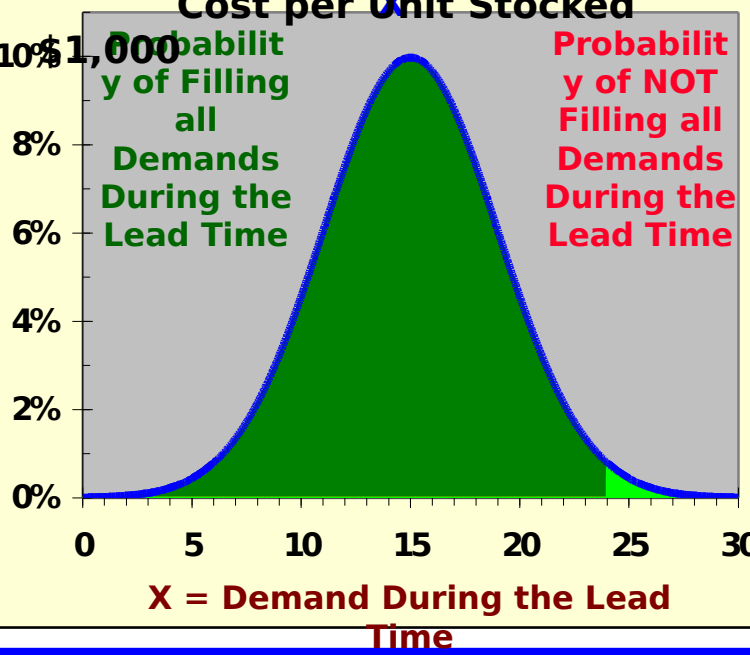
Safety Level Cost = $12,000

Stock Availability = 99.9%

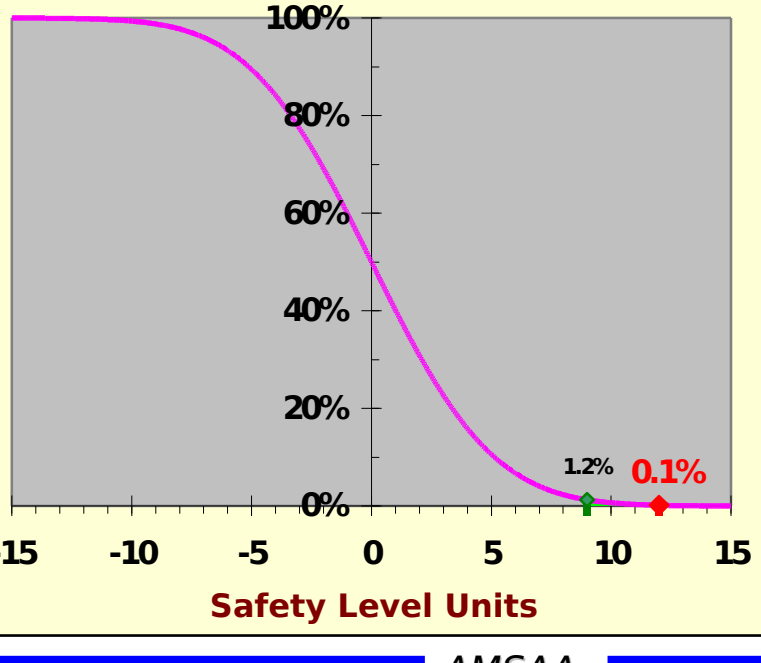
For The Additional Safety Level Units Stocked:

Additional Safety Level Cost	$3,000
Decrease in Risk of Backorders	1.1%
Cost per 1% Reduction in the Risk of Backorders	$2,727

PROBABILITY LEAD TIME DEMAND = X



RISK OF BACKORDERS



MANAGING RISK FOR ONE ITEM

Reorder Point 30 = 15 + Safety Level

Lead Time Demand Distribution = Normal

Mean Lead Time Demand = 15 Units

Standard Deviation = 4 Units

PROBABILITY LEAD TIME DEMAND = 30 = 10%

Cost per Unit Stocked = $1,000

Safety Level Cost = $15,000

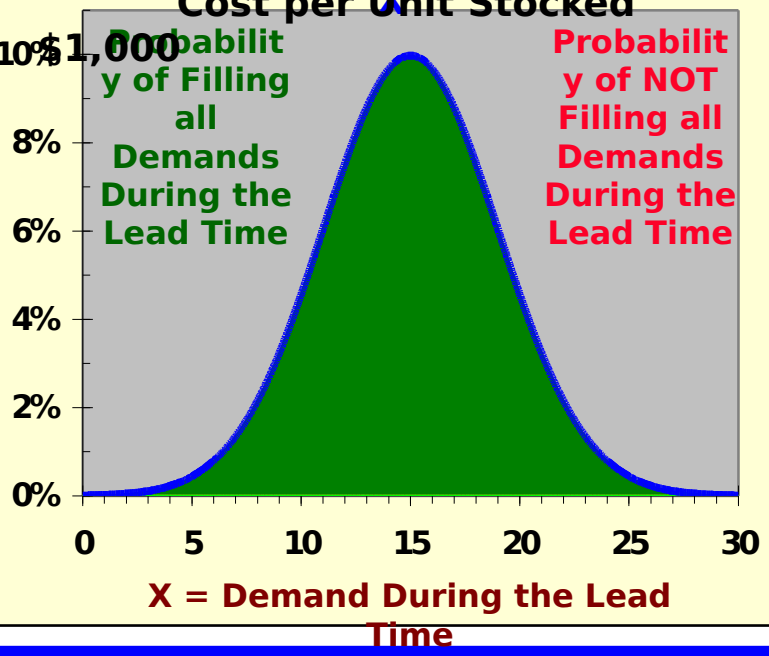
Stock Availability = 99.99%

For The Additional Safety Level Units Stocked:

Additional Safety Level Cost $3,000

Decrease in Risk of Backorders 0.12%

Cost per 1% Reduction in the Risk of Backorders $25,000



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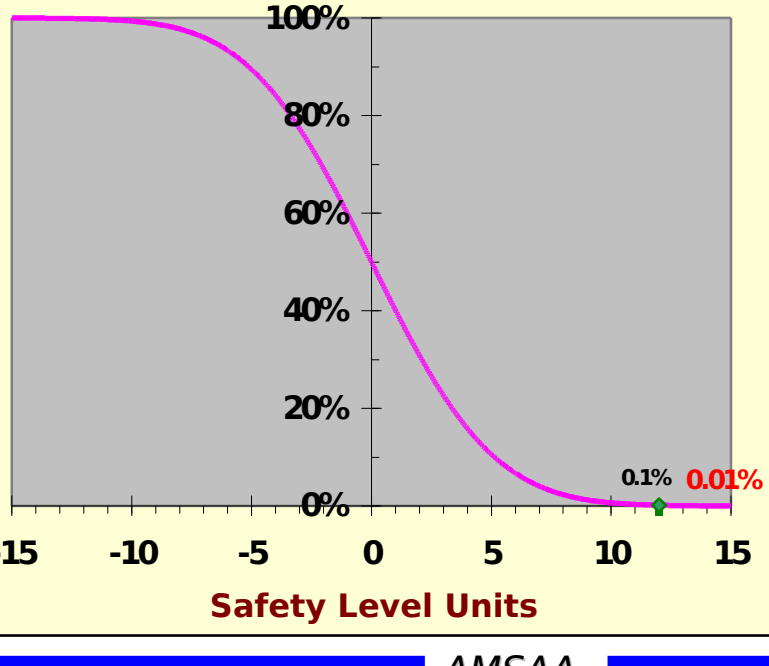
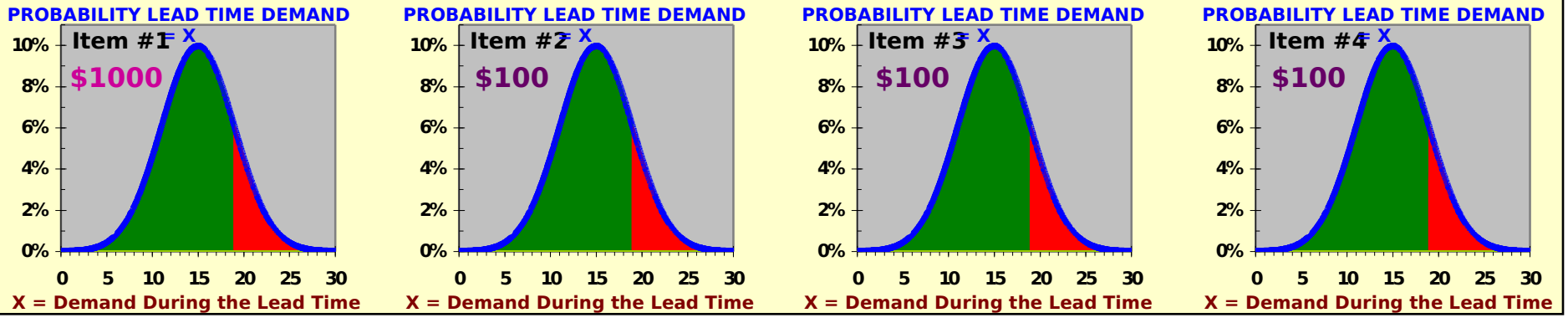


MANAGING RISK AMONG ITEMS

#1 OVER ALL 4 ITEMS: COST = $24,700 STOCK AVAILABILITY = 84.1

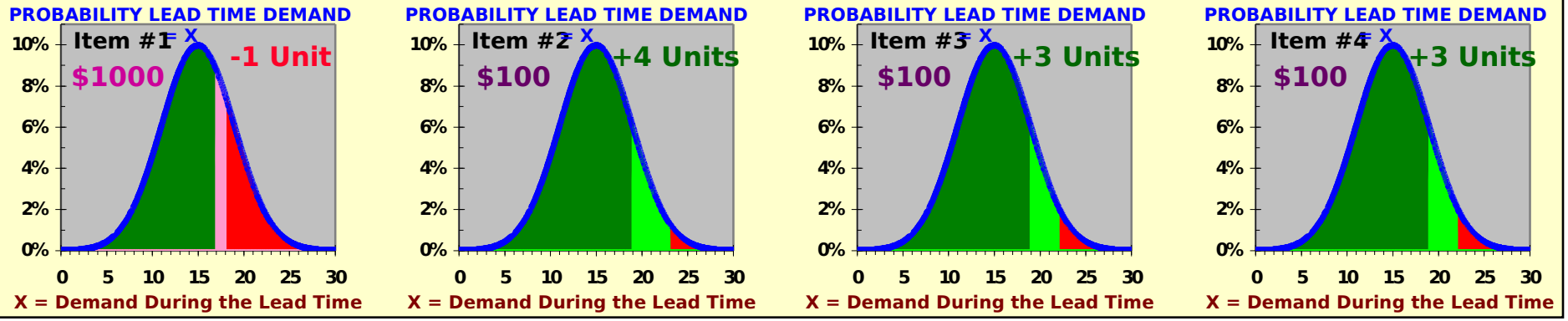
Item #1	Item #2	Item #3	Item #4
Stocked = 19 Units	Stocked = 19 Units	Stocked = 19 Units	Stocked = 19 Units
Cost = $19,000	Cost = $1,900	Cost = $1,900	Cost = $1,900
Availability = 84.1%	Availability = 84.1%	Availability = 84.1%	Availability = 84.1%



For the same total cost, Increased Stock Availability by shifting stock from a higher cost item to lower cost items

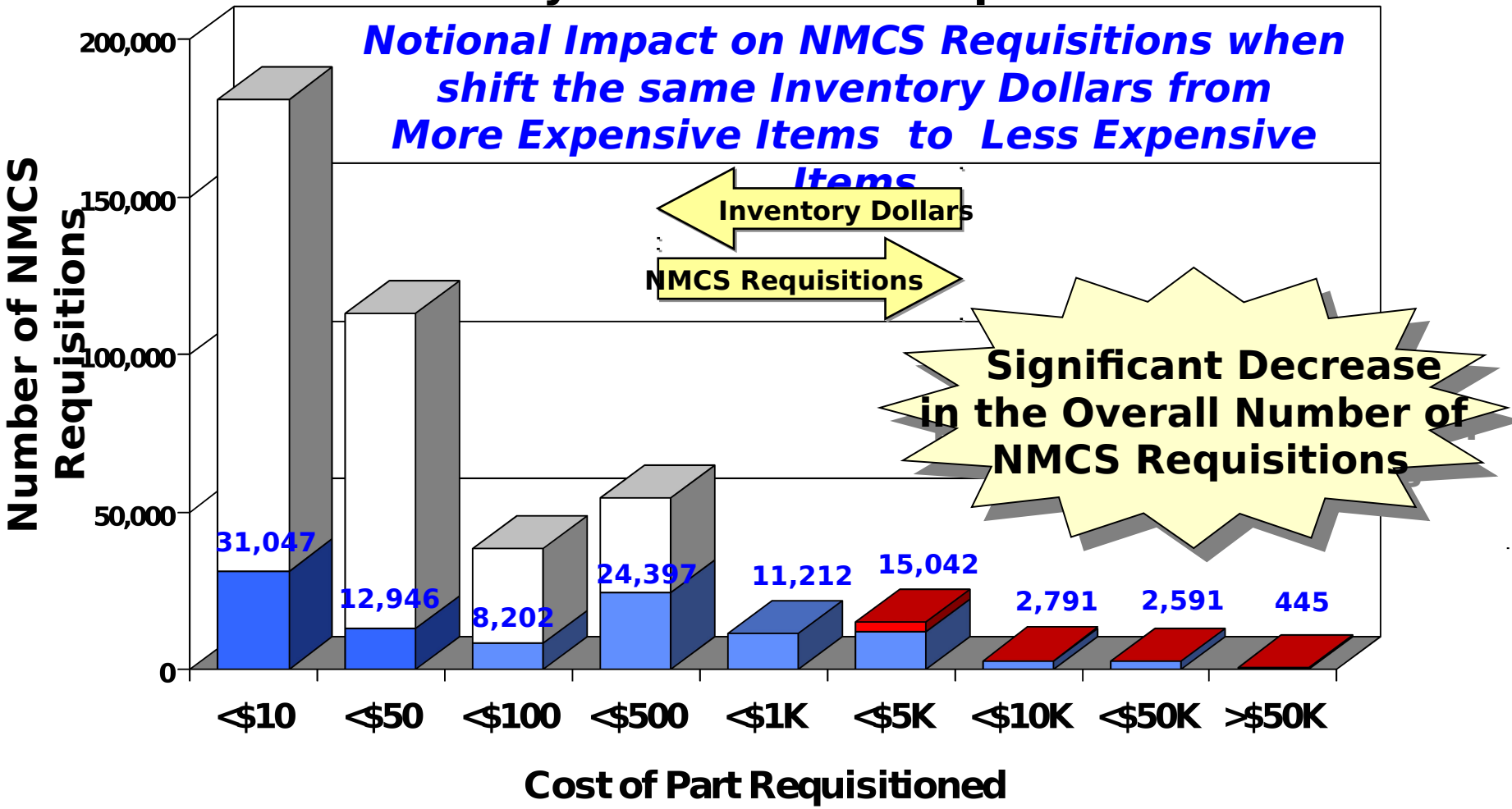
#2 OVER ALL 4 ITEMS: COST = $24,700 STOCK AVAILABILITY = 92.5

Item #1	Item #2	Item #3	Item #4
Stocked = 18 Units	Stocked = 23 Units	Stocked = 22 Units	Stocked = 22 Units
Cost = $18,000	Cost = $2,300	Cost = $2,200	Cost = $2,200
Availability = 77.4%	Availability = 97.7%	Availability = 96.0%	Availability = 96.0%

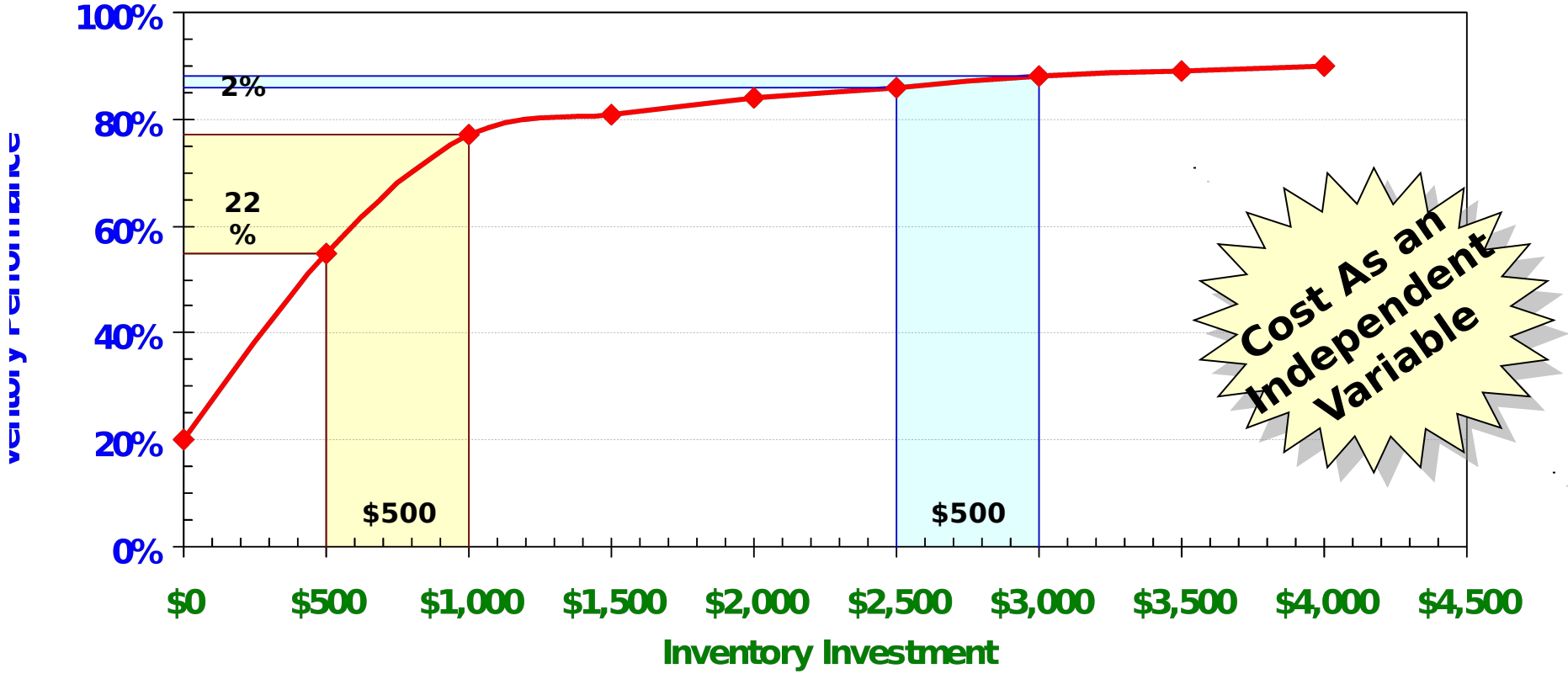


MANAGEMENT OF RISK – NMCS REQUISITIONS

Number of Not Mission Capable Supply (NMCS) Requisitions Broken out by Cost of Part Requisitioned



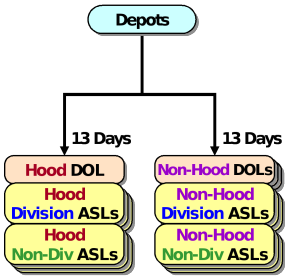
COST VERSUS PERFORMANCE TRADE-OFF CURVE



- Each Point Represents a "Least Cost" Soluti
- Use for Performance or Budget Target
- Decreasing Marginal Returns

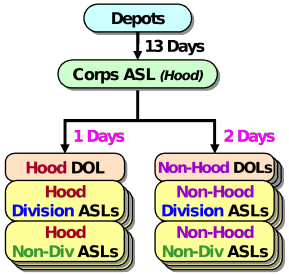
RESULTS WITH ALTERNATIVE SUPPORT STRUCTURES

BASE CASE:



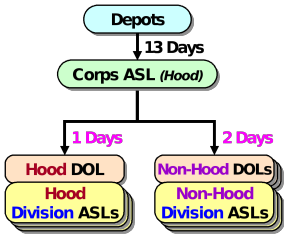
Achieved Dollars / Weight Reductions at Division ASLs for all alternatives

ALTERNATIVE #1:



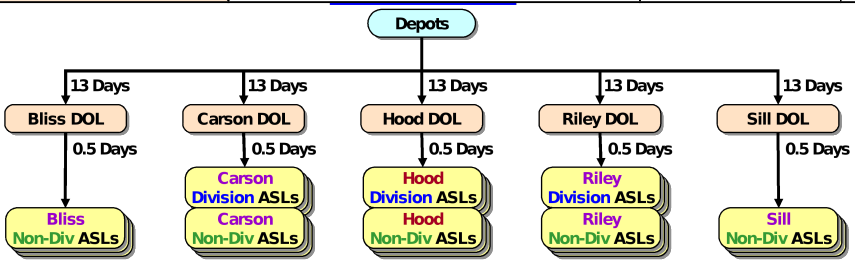
Comparable Results for Non-Division ASLs

ALTERNATIVE #2:

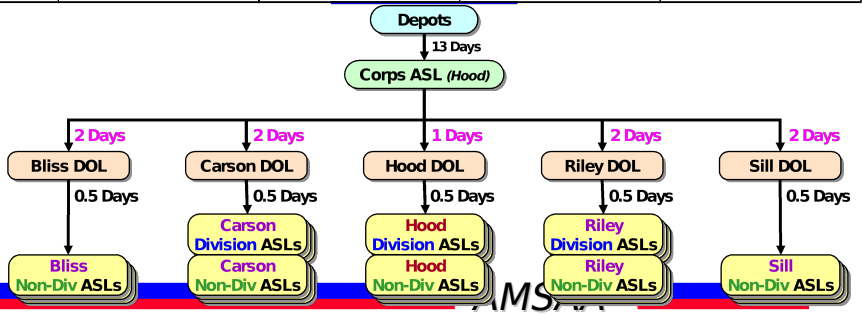


	Structure	Over All ASLs			Over the 17 Division ASLs		
		RO Dollars	RO Weight	RO Cube	RO Dollars	RO Weight	RO Cube
Base Case	Current	$323.8M	10,986K	681K	$155.4M	7.453K	382K
Alternative #1	New Corps ASL	- 5%	+ 0%	+ 3%	- 65%	- 66%	- 63%
Alternative #2	New Corps ASL, No Non-Div ASLs	+ 22%	+ 6%	+ 8%	- 56%	- 64%	- 60%
Alternative #3	DOL Supply Echelon	- 1%	+ 5%	+ 4%	- 66%	- 69%	- 66%
Alternative #4	New Corps ASL, DOL Supply Echelon	+ 4%	+ 6%	+ 9%	- 72%	- 77%	- 71%

ALTERNATIVE #3:

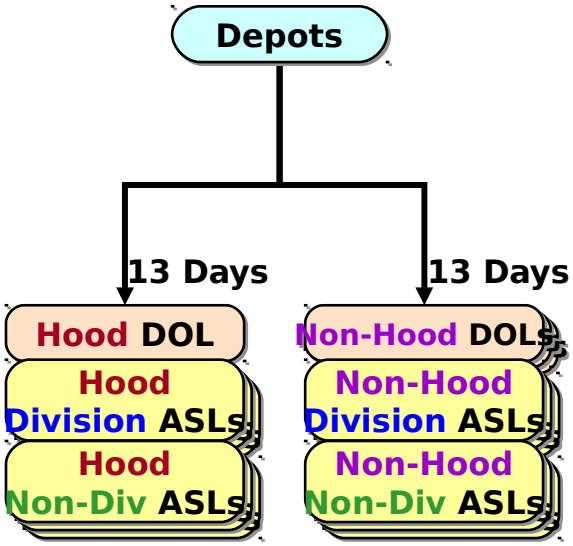


ALTERNATIVE #4:



RWT / OST SENSITIVITY ANALYSIS – ALTERNATIVE #1

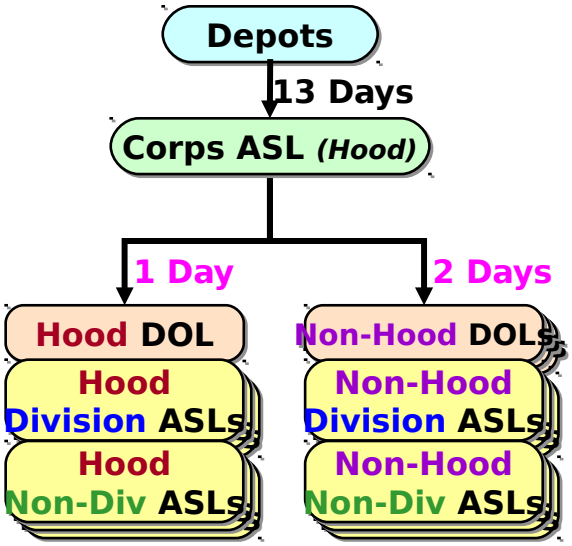
BASE CASE:



Substantially reduces Division ASL "logistics footprint"

Risk of increasing overall dollar value of III Corps ROs if not able to achieve 2 day OST

ALTERNATIVE #1:



	RWT (Depot to Corps ASL)	OST (Corps ASL to Hood ASLs)	OST (Corps ASL to Non-Hood)	Over all ASLs			Over the 17 Division ASLs		
				RO Dollars	RO Weight	RO Cube	RO Dollars	RO Weight	RO Cube
Base Case	N/A	N/A	N/A	$323.81 M	10,986 K	681K	$155.4 M	7,453K	382K
Alternative #1.1	13 Days	1 Day	2 Days	- 5%	0%	+ 3%	- 65%	- 66%	- 63%
Alternative #1.2	13 Days	2 Days	2 Days	- 3%	+ 1%	+ 4%	- 60%	- 65%	- 60%
Alternative #1.3	13 Days	2 Days	5 Days	+ 1%	+ 4%	+ 8%	- 54%	- 62%	- 57%

DISTRIBUTION / REDISTRIBUTION DECISION SUPPORT SYSTEM

- **Goals / Objectives:**
  - Best distribution of stock from an AMC buy or repair program
  - Economically redistribute assets to maintain field readiness in anticipation of future demand
  - When / What / Where to redistribute
- **Tradeoffs:**
  - Readiness, Customer Wait Time, Inventory Costs, Transportation Costs, Stock at Different Locations
- **Constraints:**
  - Assets eligible for distribution / redistribution

Push System

Principal Distribution Site Approach

Compute an Enterprise Reorder Point, Requirements Objective, and Repair Action Point, then Distribute

POSSIBLE DISTRIBUTION / REDISTRIBUTION RULES

- **Use SESAME to minimize CWT in multi-echelon SSF**
  - Air Force approach
- **Recursive fair share**
  - Extension of fair share to multi-echelon system
  - Multiple Supply Performance Analyzer (SPA) runs
    - ✓ **Enterprise run for AMC assets**
    - ✓ **Depot and Below Depot runs to determine assets for each SSF echelon**
  - Fair share distribution of echelon assets

REQUISITION REFERRAL DECISION SUPPORT SYSTEM

- **Goals / Objectives:**
  - Determine the most cost effective AMC assets to be used to satisfy a customer requisition
- **Tradeoffs:**
  - Inventory Cost, Transportation Costs, Time / Readiness Impacts
- **Constraints:**
  - Which assets, at which locations, are candidates for shipment to customer

SAP APO Global Available to Promise is Rule Based with No Cost, Demand, or Inventory Level Inputs

REQUISTION REFERRAL DECISION SUPPORT SYSTEM (Continued)

- **AMSAA's Asset Redistribution Model**
  - Developed for Objective Supply Capability
  - Internal transportation cost database
  - Only Below Depot excess to be used to satisfy requisitions
- **Modifications to Asset Redistribution Model**
  - Allow backshipping through current Principal Distribution Sites
    - ✓ **Established routes and consolidated shipments**
  - Extension to reparable items
  - All AMC assets available to satisfy requisitions
  - Input transportation costs from Military Traffic Management Command

RETURNS DISPOSITION DECISION SUPPORT SYSTEM

- **Goals / Objectives:**
  - Determine whether AMC should accept a return, and where that asset should be placed
- **Tradeoffs:**
  - Inventory Costs, Transportation Costs, Readiness
- **Constraints:**
  - AMC return / credit policies

Basis for Decision Support System for Credit

Enterprise and Local Economic Retention and Return Levels

ENTERPRISE LOGISTICS CHAIN SIMULATION

Why A Simulation?

Precision required to evaluate alternatives.

Analytical Models Inadequate.

Virtual Real-World.

More effective and efficient analyses.

Evaluate Individual DSS against historical data.

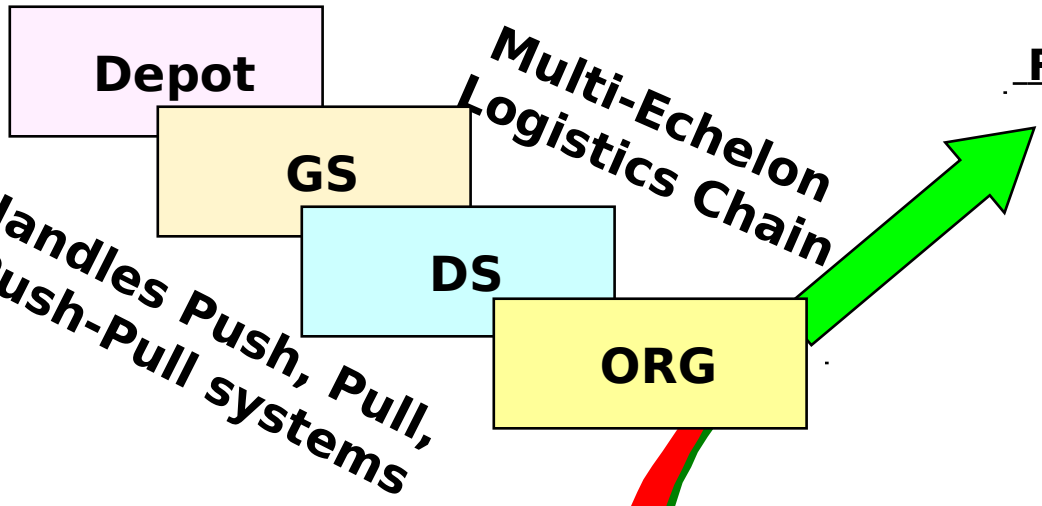
Too many factors affect Optimal Control.

SSF Log Chain & alternatives too complex for one analytical model.

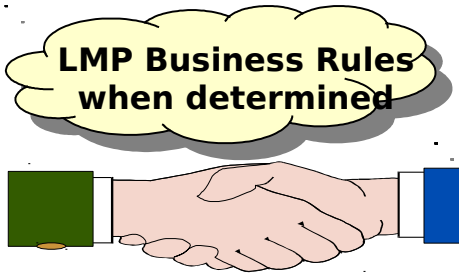
Less Time & Cost than a demo.

Tool for evaluating any emerging WLMP Business Rules

Simulation Capabilities



REPLENISHMENT FROM
Maintenance
Procurement
Requisitioning



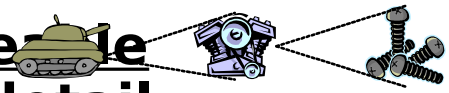
INTERFACES WITH
SSF DSS/AMC Models (SESAME,VSLEOQ/SPA, Req Referral Rules)

DEMANDS
Historical / Monte Carlo

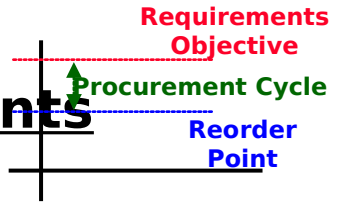
Some Simulation Features

- Up to a five echelon logistics cl

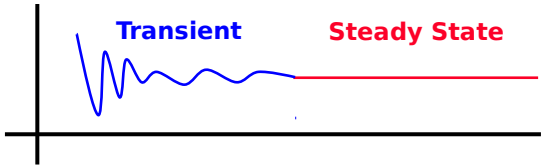
- Model, if necessary, end item, Line Replaceable Unit, and Shop Replaceable Unit levels of detail.



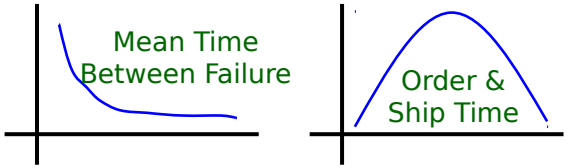
- Demand forecasting and updating of requirements computations and asset distributions.



- Steady state and transient analyses.

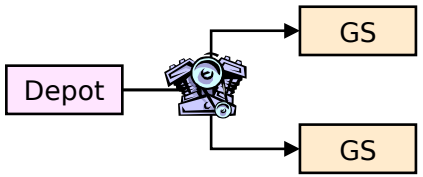


- Variability of parameters.



- Infinite source and finite source failures.

- Reports number of shipments between stock points and to customers.



SAMPLE SIMULATION EVENTS

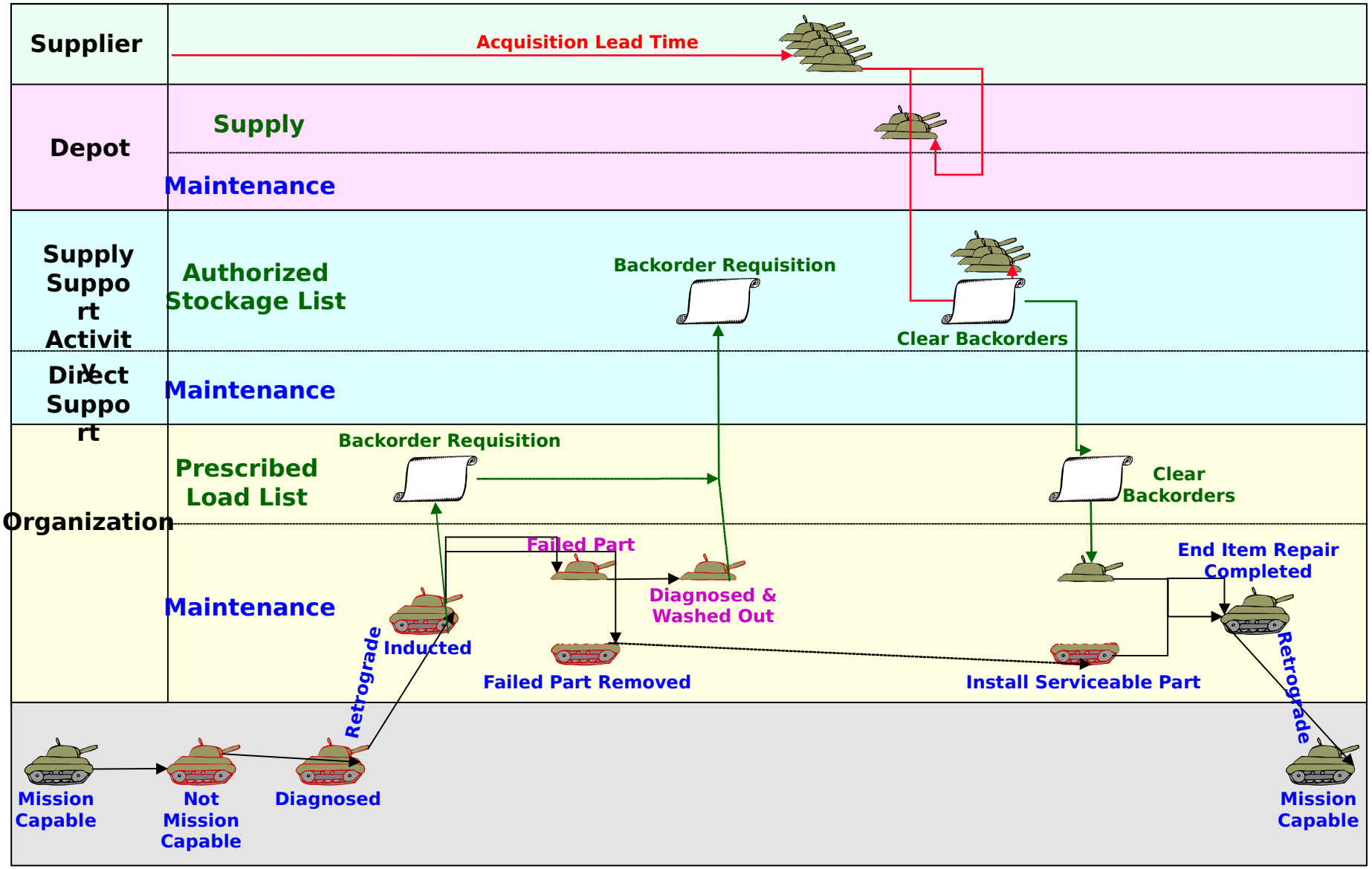
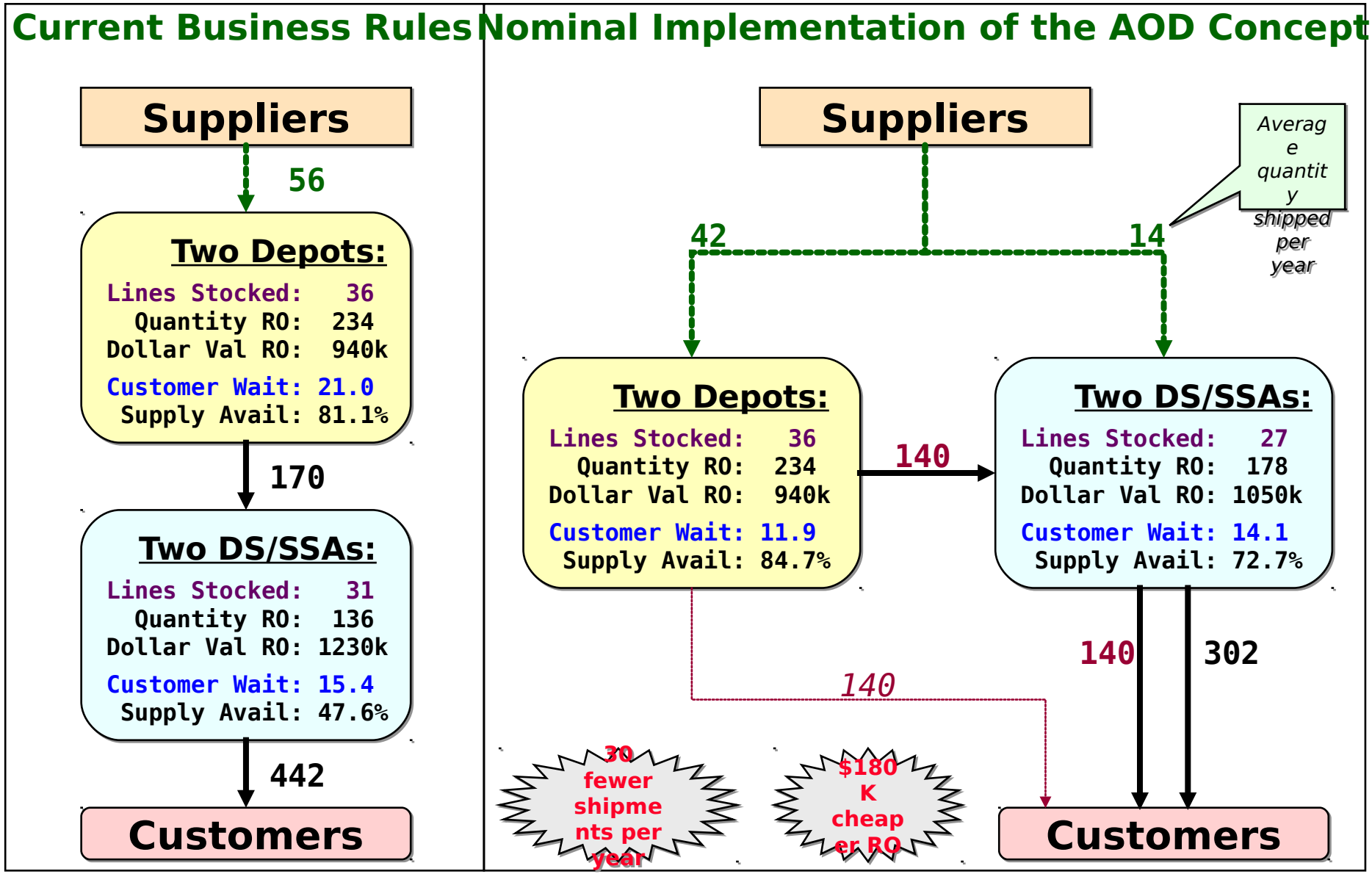


Illustration of Evaluation Capabilities

mparison of Two Different Sets of Business Practice

	Current SSF MS I/II Business Rules	One Nominal/ Notional/ Possible Implementation of the AOD Concept
Enterprise ROP/ RO /RAP Computation	Computed by summing a Depot value (SPA/VSLEOQ) and a Below Depot value (not VSLEOQ).	Enterprise ROP / RO / RAP computed by SPA / VSLEOQ.
	Depots as computed by VSLEOQ. Below Depot as determined locally.	Depots assigned same assets as under current business practices. Below Depot divide remaining Enterprise assets based on "fair share" rules.
Procure When	Enterprise assets $\leq$ Enterprise ROP	Enterprise assets $\leq$ Enterprise ROP
Initial Distribution Of Procured Assets	Depots are lowest echelon considered for distribution of assets arriving from procurement.	Below Depot locations considered for distribution of assets arriving from procurement.
	Distributed based on percentage	Distributed based on deficit to

Sample Simulation Results



THE LOGISTICS MODERNIZATION PROGRAM FACTOR

- **Simulation can be used to evaluate AMC / Logistics Modernization Program Business Rules as they evolve**
  - Can tie Business Rules to Readiness & Supply Performance
- **Implementation will depend on Logistics Modernization Program capabilities and configuration**
  - Met with Lead AMC Integration Support Office to discuss implementation
  - Logistics Modernization Program implementation plan for Single Stock Fund Decision Support Systems premature
- **Selected Essential-Item Stock for Availability Method in Logistics Modernization Program; Supply Performance Analyzer and Variable Safety Level / Economic Order Quantity models offline**
- **Logistics Modernization Program "Global Available-To-Promise" functionality does not explicitly consider the costs for inventory or transportation**
- **Logistics Modernization Program should establish an automatic interface to Military Traffic Management Command shipping cost database**

NEURAL NETWORKS FOR FORECASTING

- **Logistics Modernization Program contains several simple and complex demand forecasting techniques that are widely used in industry**
- **Implementation of Single Stock Fund introduces more complexity to forecasting demand on AMC**
- **Several large companies have achieved improvements in demand forecasting by using emerging, state-of-the-art Neural Network and Data Mining techniques**
  - Wal-Mart, USAIR, Wrangler, Sears, Pep Stores
- **Joint AMSAA and University of Delaware proposal to investigate Neural Network / Data Mining / Artificial Intelligence methodologies for demand forecasting**

STATUS

- **COMPLETED:**
  - AMC Enterprise Logistics Chain Simulation
    - ✓ **Modules easily added for emerging Business Rules and logistics alternatives**
  - Shipping Cost Database Research (*ALL DSS*)
    - ✓ **MTMC maintains only credible real time shipping data**
  - Identification of Decision Support System Alternatives to be analyzed
  - Development of Neural Network Proposal for Forecasting Demand in the SSF
  - Transshipment in Asset Redistribution Model (*Requisition Referral)*
  - III Corps Stock Positioning Study
  - Initial Meetings with LAISO and LMP regarding implementation
  - AMC Enterprise Requirements Determination Blueprint
  - Readiness Based Sparing at Ft. Bucker

STATUS (Continued)

- **PENDING:**
  - **Distribution SESAME** ***(Distribution/ Redistribution/ Requirements Determination)***
  - **Recursive Multi-Link** ***(Requirements Determination)***
  - **Coordinated single location policies** ***(Requirements Determination)***
  - **Asset Redistribution Model (ARM) Modifications** ***(Requisition Referral)***
  - **Simulation interfaces to Decision Support Systems** ***(All DSS)***
  - Local Retention Levels *(Returns Disposition)*
  - Rules for when to Redistribute *(Distribution/ Redistribution)*
  - Transportation Cost Database *(ALL DSS)*
  - Implementation in Logistics Modernization Program
  - Support Structure Alternatives Analyses

SUMMARY

- **Multi-Echelon Logistics Chain offers better opportunities to tie logistics dollars and supply performance to readiness goals**
- **Single Stock Fund decisions should tradeoff Readiness / Customer Wait Time /Supply Performance, Inventory Cost, Transportation Cost**
  - Transportation Cost Database needed
- **Proposed development of four Decision Support Systems**
  - Requirements Determination
  - Distribution / Redistribution
  - Requisition Referrals
  - Returns Disposition
- **Simulation of AMC Enterprise Logistics Chain developed and tested**
  - Evaluate AMC Business Rules and Practices
  - Evaluate Decision Support System Alternatives
  - Evaluate emerging Logistics Modernization Program Business Rules & Practices
  - Flexible tool for future AMC Enterprise Logistics Analysis
- **Logistic Modernization Program Implementation Challenges**
  - Solution not yet directly extended to Below Depot locations
  - Below Depot Stock, Return/Retention and Redistribution Policy
- **Neural Networks for Supply Chain Forecasting**

Backup Charts

SOME SIMULATION INPUTS

- **Force Structure**
- **Weapon System Characteristics:**
  - Quantities, Mean Time Between Failures, Mean Time To Repair, etc.
- **Secondary Item Characteristics:**
  - Mean Time Between Failures, Repair Cycle Times, Order and Ship Times, Acquisition Lead Times, Replacement Task Distributions, Maintenance Task Distributions, Unit prices, Essentiality Codes, etc.
- **Business Rules:**
  - Requirements Determination
  - Procurement / Distribution
  - Redistribution
  - Requisition Referral
  - Repair

SIMULATION OUTPUTS

- **Computed by location, by end item, by time period, etc.**
- **Examples of current output types:**
  - Weapon system performance
  - Customer support
  - Supply performance
  - Transportation metrics
  - Assets and requirements
  - Procurement
  - Maintenance
- **Relatively easy to add additional outputs**

Readiness Based Sparing at Ft. Rucker

- AMCOM given control of inventories at Ft. Rucker and Ft. Bliss (Sept. 2002).
- AMCOM CG requested AMSAA recommend RBS ASL/PLL for Ft. Rucker (Dec. 2002).
- AMSAA developed Rucker ASL and provided results to Ft. Rucker (May 2003).
- AMCOM approved RBS recommendations and implemented RBS AWCF ASL (Oct. 2003).

Stock Impact

- Less lines (754 fewer unique lines)
  - Eliminates lines with no demands and lines that are not mission essential
- Reduced cost
  - Current $129.2 M RBS $92.3 M Reduction of $36.9 M
- Comparison to current stock
  - Developed Access tool to facilitate AMCOM ASL review process.

Recommended as Future Methodology by LTTF and ASB

ASB

Highlights

- RBS ASL based on Operational and Supply Availability requirements
- Used most accurate, recent and complete data available
  - Tailored specifically for Ft. Rucker
  - MCTBF and MTTR based on five years of contractor data on equipment status
  - Repair Cycle Times by NSN from SAMS
  - National Stock Availability from MILSTEP
  - Demand data from ILAP

Ongoing/FY04 Support:

- Continue to monitor and support implementation